

Aleksandar Milivojević

INFORMATION	<p><i>Email:</i> milivojevic@mpim-bonn.mpg.de <i>Website:</i> https://guests.mpim-bonn.mpg.de/milivojevic <i>DOB:</i> September 5, 1992 Bonn, Germany. <i>Citizenship:</i> Croatian</p>
RESEARCH INTERESTS	Rational homotopy theory and algebraic topology of manifolds, in particular almost complex and complex manifolds; almost complex geometry
ACADEMIC APPOINTMENTS	Max Planck Institute for Mathematics , Bonn. Postdoctoral fellow August 2021 – July 2023
EDUCATION	Stony Brook University , Stony Brook, NY Ph.D. student, Mathematics, August 2015 – May 2021, advisor Dennis Sullivan University of Zagreb , Croatia M.S., Theoretical Mathematics, 2013–2015, <i>Summa Cum Laude</i> , advisor Goran Muic B.S., Mathematics, 2010–2013
PUBLICATIONS AND ACCEPTED	<ul style="list-style-type: none">– Milivojević, A., 2022. On the characterization of rational homotopy types and Chern classes of closed almost complex manifolds, <i>Complex Manifolds</i>. link.– Hu, J. and Milivojević, A., 2022. Infinite symmetric products of rational algebras and spaces, <i>Comptes Rendus Mathématique</i>. link.– Milivojević, A., 2022. The weak form of Hirzebruch’s prize question via rational surgery. <i>Journal of Topology and Analysis</i>. link– Ferlengez, B., Granja, G., and Milivojević, A., 2021. On the topology of the space of almost complex structures on the six sphere. <i>New York Journal of Mathematics</i>, Volume 27 (2021), 1258-1273. link– Albanese, M. and Milivojević, A., 2021. Spin^h and further generalisations of spin. <i>Journal of Geometry and Physics</i>, 164, p.104174. link– Milivojević, A., 2021. On the realization of symplectic algebras and rational homotopy types by closed symplectic manifolds. <i>Proceedings of the American Mathematical Society</i>, 149(5), pp.2257-2263. link– Milivojević, A., 2020. Another proof of the persistence of Serre symmetry in the Frölicher spectral sequence. <i>Complex Manifolds</i>, 7(1), pp.141-144. link– Cattalani, S. and Milivojević, A., 2020. Verifying the Hilali conjecture up to formal dimension twenty. <i>Journal of Homotopy and Related Structures</i>, pp.1-9. link– Albanese, M. and Milivojević, A., 2019. Connected sums of almost complex manifolds, products of rational homology spheres, and the twisted spin^c Dirac operator. <i>Topology and its Applications</i>, 267, p.106890. link– Albanese, M. and Milivojević, A., 2019. On the minimal sum of Betti numbers of an almost complex manifold. <i>Differential Geometry and its Applications</i>, 62, pp.101-108. link

PREPRINTS

- Milivojević, A. and Wilson, S.O., 2022. Invariant Dolbeault cohomology for homogeneous almost complex manifolds. [link](#)
- Milivojević, A. Stelzig, J., Zoller, L., 2022. Poincaré dualization and formal domination. [link](#)
- Milivojević, A. and Stelzig, J., 2022. Bigraded notions of formality and Aeppli-Bott-Chern-Massey products. [link](#)

REPORTS

- Oberwolfach, Research in pairs with J. Stelzig, 2021. [link](#)
- Oberwolfach, Almost Complex Geometry mini-workshop, 2020. [link](#)

AWARDS AND STIPENDS

- The John W. Milnor Endowed Graduate Fund in Math, Stony Brook, 2018
- Mathematics departmental award, University of Zagreb: for M.S. students, University of Zagreb, 2015, for B.S. students, 2013
- Academic Stipends from the City of Dubrovnik, Croatia and from the Croatian Ministry of Education, 2011–2015

INVITED TALKS AND LECTURES (IN PERSON UNLESS INDICATED ONLINE)

- Instituto Superior Técnico Lisboa, Geometry seminar, June 2022
- Columbia University, Algebraic Topology seminar, May 2022
- City University of New York Graduate Center, Differential Geometry and Topology seminar, March 2022
- Universitat de Barcelona, Topology seminar, February 2022
- IISER Kolkata, five-part lecture series October–November 2021 (online)
- Max Planck Institute for Mathematics, Bonn, Oberseminar, November 2021
- University of Oregon Topology/Geometry Zoom Seminar, September 2021, December 2020 (both online)
- Ludwig–Maximilians–Universität München Oberseminar Geometrie, December 2020 (online), October 2019
- Oberwolfach mini-workshop Almost Complex Geometry, October 2020 (online)
- City University of New York Graduate Center almost complex geometry seminar, September 2020, September 2019, March–April 2018
- Bronx Community College, December 2019
- University of Zagreb topology seminar, March 2019, July 2018
- City University of New York Graduate Center Topology, Geometry, and Physics Seminar, November 2018
- Dennis Sullivan’s Stony Brook seminar, October 2017
- Workshop on J-holomorphic curves and Gromov–Witten invariants at the National Institute of Science Education and Research (NISER) Bhubaneswar, India, July 2017
- Dennis Sullivan’s City University of New York Graduate Center seminar, May 2017

WORKSHOPS AND CONFERENCES

- Institut Mittag–Leffler, workshop “Higher algebraic structures in algebra, topology and geometry”, participated two weeks, January–February 2022.

Oberwolfach Research-in-Pairs, with J. Stelzig, “Formality, non-zero degree maps, and (almost) complex manifolds”, December 2021

Oberwolfach mini-workshop Almost Complex Geometry, October 2020

European Talbot workshop on free loop spaces, Fischbach bei Dahn, Germany, July-August 2018

James Simons’ 80th birthday conference – Fluids in $\dim \leq 3$ and complex manifolds in $\dim \geq 3$, CUNY Graduate Center, April 2018

Workshop on J-holomorphic curves and Gromov–Witten invariants at the National Institute of Science Education and Research (NISER) Bhubaneswar, India, July 2017

Algebraic Geometry Northeastern Series, November 2016, University of Massachusetts Amherst, and April 2016, Yale University

Graduate Student Conference in Algebra, Geometry, and Topology, May 2016, Temple University

TEACHING
EXPERIENCE

Teaching Assistant, Stony Brook University

- *Calculus*, Fall 2015, Fall 2016, Spring 2017, Spring 2018, Fall 2018, Fall 2019, Spring 2020
- *Introduction to Analysis*, Fall 2017, Spring 2019
- *Differential Equations with Linear Algebra*, Spring 2016
- *Differential Equations: Dynamics and Change*, grader Spring 2016
- *Advanced Algebraic Topology*, grader Fall 2020
- *Geometry for Teachers*, grader Fall 2020
- *Topology/Geometry II graduate core course*, grader Spring 2021

Junior Teaching Assistant, University of Zagreb

- *Linear Algebra, Probability, Set Theory, Metric Spaces*

OUTREACH,
SERVICE, AND
OTHER
EXPERIENCE

Mentored the sophomore Spencer Cattalani as part of the Directed Reading Program at Stony Brook University. This led to the publication “Verifying the Hilali conjecture up to formal dimension twenty”, *Journal of Homotopy and Related Structures*, 2020; [link](#)

Referee for *Advances in Mathematics*, *Journal of Topology*, *Vietnam Journal of Mathematics*, *Mathematische Nachrichten*, *Complex Manifolds*; quick opinion for *Differential Geometry and its Applications*

Reviewer for zbMATH, Mathematical Reviews

American Mathematical Society Graduate Student Chapter at Stony Brook, *President*, 2017–2019

Various programs for extracurricular mathematics for high-school students while at the University of Zagreb and at Stony Brook (reference: [David Kahn](#))